

Appl. No. 10/700,233
Amdt. Dated: May 30, 2006
Reply to Office Action of 01/27/2006

REMARKS / ARGUMENTS

For the convenience of the Examiner and clarity of purpose, Applicant has reprinted the substance of the Office Action in *10-point bolded and italicized font*. Applicant's arguments immediately follow in regular font.

Election/Restriction

- 1. Upon reconsideration, the restriction/election requirement that was made by telephone on 10/26/2005 has since been withdrawn by the examiner. Claims 1-35 have been examined.***

Applicant thanks the Examiner for the reconsideration and withdrawal of the restriction/election requirement.

Claim Objections

- 2. Applicant is advised that should claim 2 be found allowable, claim 12 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Similarly, claims 3 and 1 4 are the same.***

Applicant believes that the Examiner meant to refer to original claims 2 and 13 (not 12) as being substantially duplicative in nature. Claims 13 and 14 have been cancelled herein in order to bring the claims into compliant form.

Claim Rejections—35 USC § 112

- 3. Claims 32-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.***

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With respect to claims 11 and 20, they appear to improperly recite a Markush group. Consequently, it is impossible to determine which elements of the group are required by the claims. When materials recited in a claim are so related as to constitute a proper Markush group, they may be recited in the conventional manner, or alternatively. For example, if "wherein R is a material selected from the group consisting of A, B, C and D" is a proper limitation, then "wherein R is A, B, C or D" shall also be considered proper (emphasis added). See MPEP § 2173.05(h).

Applicant believes that the Examiner meant to refer to claim "23", not claim 20, as failing to properly recite a Markush group, as claim 20 does not contain Markush language. Consequently, claims 11 and 23 have been amended herein to correct the informalities pointed out by the Examiner. Claims 11 and 23 are now believed to be in condition for allowance.

With respect to claims 32 and 34, the phrase "the hardened composition" lacks antecedent basis.

Claims 32 and 34 have been amended herein to correct for the informalities pointed out by the Examiner. Claims 32 and 34 are now believed to be in condition for allowance.

With respect to claim 33, the phrase "The scratch resistant countertop of Claim 1" lacks antecedent basis since there is no countertop in claim 1.

Claim 33 has been amended herein to correct for the informality pointed out by the Examiner. Claim 33 is now believed to be in condition for allowance.

With respect to claim 35, it is rejected for being dependent on a rejected claim.

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Applicant respectfully traverses the rejection of claim 35. Because claim 35 depends from claim 34, and because Applicant contends that claim 34 is patentable as originally submitted, no amendment is made herein to claim 35 in response to this rejection. Reconsideration of this rejection in light of the arguments presented herein is respectfully requested.

Claim Rejections -35 USC § 103

4. Claims 18, 19, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan (GB 2 110 693) in view of Nonken (US 3,812,314).

Egan discloses an acid-resistant flooring composition comprising an epoxy resin such as Araldite (page 1, line 49), sand filler, and granite chips (page 1, lines 29-32).

Egan is silent with respect to the addition of at least one carboxylic acid anhydride.

Nonken teaches that Araldite resins contain either a dibasic acid or polyamine as a hardener such as hexahydrophthalic anhydride (col. 5, lines 21-27).

Given that Egan teaches the use of Araldite resins and further given that Nonken teaches that Araldite resins contain a dibasic acid anhydride such as hexahydrophthalic anhydride, it would have been obvious to one of ordinary skill in the art to utilize an acid anhydride as the Araldite hardener of Egan, there being no expected or surprising results by using the acid anhydride over polyamine, and thereby arriving at the presently cited claims.

Applicant respectfully traverses this rejection of claims 18, 19, 23 and 24. Applicant contends that neither Egan or Nonken, alone or in combination, disclose or teach the compositions recited in claims 18, 19, 23 and 24. According to MPEP § 706.02(j), for a claim to be obvious, there must be a) a suggestion or motivation to combine reference teachings, b) a reasonable expectation of success, and c) the references must teach all of the claim limitations, *In*

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re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). The Examiner has not identified any teaching or suggestion that Egan or Nonken, alone or in combination, teach all of the claim limitations of the claims of the claims as amended with this communication.

Independent claim 18 has been amended herein to more accurately described the Applicants instant invention. Neither Egan or Nonken disclose or suggest all of the claim limitations of the presently claimed invention. More specifically, neither Egan nor Nonken, alone or in combination, describe or suggest a curable resinous composition comprising two or more carboxylic acid anhydrides, wherein at least one acid anhydride is an aromatic acid anhydride and at least one acid anhydride is an alicyclic acid anhydride. It would not be obvious to one of skill in the art to prepare a curable resinous composition comprising epoxy resin, at least one naturally-occurring inorganic material, granite chips, and two or more carboxylic acid anhydrides, one of which is aromatic and the other of which is alicyclic, as recited in amended claim 18, in order to obtain the advantageous composition of Applicants instant invention.

Similarly, because independent claim 18, upon which claims 19, 23, and 24 depend, has been distinguished above regarding both Egan and Nonken, it is believed that these claims are deemed allowable by depending upon an allowable independent claim.

Neither reference suggests combining the teachings. Furthermore, the two references do not teach all of the claim limitations for pending claims 18, 19, 23 and 24, as amended herein. Accordingly, Applicant requests that the rejections of claims 18, 19, 23 and 24 under 35 U.S.C. § 103(a) be withdrawn.

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5. Claims 19-22 and 27 are obvious over Egan (GB 2 110 693) in view of Nonken (US 3,812,314) and further in view of Hollstein et al (US 5,354,939).

The discussion with respect to Egan and Nonken in paragraph 4 above is incorporated here by reference.

While the combined teachings of Egan and Nonken provide for an acid anhydride such as hexahydrophthalic anhydride, it fails to teach other acid anhydride hardeners for epoxy resin.

Hollstein et al discloses epoxy resin compositions and teaches that typical hardeners include anhydrides of polycarboxylic acids such as phthalic anhydride and others (col. 4, lines 14-26). It is the examiner's position that it is obvious to use more than one acid anhydride. It is well settled that it is prima facie obvious to combine two ingredients, each of which is targeted by the prior art to be useful for the same purpose. In re Lindner 457 F, 2d 506,509, 173 USPQ 356, 359 (CCPA 1972). Moreover, the use of flake phthalic anhydrides are commonly used in the art and are obvious since they have more surface area.

Given that Egan and Nonken teach acid anhydride epoxy hardeners and further given the teachings by Hollstein et al regarding known acid anhydride epoxy hardeners, it would have been obvious to one of ordinary skill in the art to utilize the known acid anhydride epoxy hardeners as taught by Hollstein in the flooring composition taught by Egan and thereby arrive at the presently cited claims.

Applicant respectfully traverses the rejection of claims 19-22 and 27. Claims 19-22 depend from independent claim 18, which Applicant contends is patentable as originally submitted and as detailed above. Consequently, no amendment is made herein to claims 19-22 in response to this rejection. Reconsideration of this rejection in light of these arguments is appreciated.

Independent claim 27 has been amended herein. As indicated by the Examiner, Egan is silent with respect to the addition of a carboxylic acid anhydride to their compositions. As similarly pointed out by the Examiner, Nonken teaches that the Araldite® resins of Egan contain either a dibasic acid anhydride or a polyamine as a hardener (col. 5, lines 21-23). There is no

teaching or suggestion by either reference of a composition as described in claim 27 as amended herein.

Hollstein describes stabilized epoxy resin compositions comprising a liquid epoxy resin, a filler, a polyether polyol, and an organically-modified sheet silicate. Hollstein further states that the composition can additionally comprise a hardener for the epoxy resin, wherein the hardener can be any suitable epoxy resin hardener (col. 4, lines 10-13). However, Hollstein makes no mention or suggestion of a composition comprising a mixture of at least two alicyclic anhydrides, as recited in pending claim 27. In fact, Hollstein makes no distinction between the use of alicyclic or aromatic anhydrides. Further, Hollstein is silent to the amount of anhydride which can be used in such a curable resinous composition.

In summary, none of the cited references, alone or in combination, suggests combining the teachings. Furthermore, the three references do not teach all of the claim limitations for pending claims 19-22 and 27. Accordingly, Applicant requests that the rejections of claims 19-22 and 27 under 35 U.S.C. § 103(a) be withdrawn.

6. Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan (GB 2 110 693) in view of Nonken (US 3,812,314) and further in view of Betts (US 3,924,880).

The discussion with respect to Egan and Nonken in paragraph 4 above is incorporated here by reference.

Egan fails to disclose the use of its acid-resistant composition in a countertop or a heat-activated catalyst.

Betts teaches that laboratory counter tops are made of highly acid resistant materials such as epoxy resin (col. 1, lines 6-14). With respect to the heat-activated catalyst, it is considered that it would have been well within the capabilities of one of ordinary skill in the art to use heat and a heat-activated

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to prevent premature curing or to accelerate curing.

Given that acid-resistant compositions like those taught by Egan are used in laboratory countertops as taught by Betts, it would have been obvious to one of ordinary skill in the art to utilize Egan's composition in a countertop and thereby arrive at the presently cited claims.

Applicant respectfully traverses the rejection of claims 34-35. Egan and Nonken have been described above. Betts is directed to a composite laboratory counter top having a backing, substrate layer of a cheap material, such as chip board, plywood, or the like. Referring to Figure 1 of Betts, the counter top (10) further necessarily comprises an aperture (13) therethrough with spacer means (20) disposed in the aperture and which extends from the top surface of the top to the bottom surface thereof. According to Betts, the presence of the spacer minimizes compressive forces on the counter top and subsequently reduces all top cracking (col. 1, lines 40-50). Further according to Betts, the counter top can be made of a ceramic material, epoxy resins, soap stone, marble, and the like (col. 2, lines 15-25). Betts makes no mention or suggestion of a counter top material composition as described by Applicants in the presently pending claim 18, to which claim 34 refers. If one were to combine Egan, Nonken, and Betts as suggested by the Examiner, Applicants presently claimed invention would not be the result.

Claim 35 depends from independent claim 34, which Applicant contends is patentable as originally submitted and as detailed above. Consequently, no amendment is made herein to claim 35 in response to this rejection. Reconsideration of this rejection in light of these arguments is appreciated.

In summary, none of the cited references, alone or in combination, suggests combining the teachings. Furthermore, the three cited references do not teach all of the claim limitations for

pending claims 34 and 35. Accordingly, Applicant requests that the rejections of claims 34 and 35 under 35 U.S.C. § 103(a) be withdrawn.

7. Claims 1-4, 10-17, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan (GB 2 110 693) in view of Nonken (US 3,812,314) and further in view of Wypych (Handbook of Fillers).

The discussion with respect to Egan and Nonken in paragraph 4 above is incorporated here by reference.

Egan discloses that granite chips have a particle size of 3-20 mm (page 1, lines 29-32), wherein the volume ratio of granite to sand ranges from 1.0:1.2 to 1.0:2.7 (page 1, lines 36-38). Note that granite and sand have approximately the same density (about 2.6 g/m³) and therefore, even though the ratio of granite to sand is less than presently claimed, the ratio reads on the presently claimed ratio if separated out when a portion of the sand is in the larger particle portion.

Egan is silent with respect to the size or size distribution of the size particles and to the use of its composition in a countertop.

Wypych teaches that sand conventionally has a particle size of 2-90 microns (page 144).

Given that Egan teaches the use of sand and further that given that sand conventionally has a particle size of 2-90 microns, it would have been obvious to one of ordinary skill in the art to utilize conventional particles of sand, including those in the presently claimed, and thereby arrive at the presently cited claims.

Applicant respectfully traverses the rejection of claims 1-4, 10-17, 25 and 26. Claim 1 as amended herein is directed to a curable resinous composition comprising an epoxy resin and two or more carboxylic acid anhydrides, wherein at least one is an aromatic acid anhydride and at least one is an alicyclic acid anhydride. As indicated previously, both Egan and Nonken are silent with regard to curable resinous compositions comprising more than a single carboxylic acid anhydride, let alone two or more acid anhydrides at least one of which is aromatic and the

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other of which is alicyclic, as recited within Claim 1. In fact, and as discussed above, Egan and Nonken suggest only the use of a single acid anhydride in epoxy resins.

Wypych describes only the physical details of sand that can be used as a filler in a variety of materials and compositions. Wypych is silent to the use of sand fillers in resinous compositions, and makes no suggestions of the use of sands in combinations with epoxy resins. As such, because independent claim 1 is directed to a curable resinous composition which includes two or more carboxylic acid anhydrides, at least one of which is aromatic and at least one of which is alicyclic, and Applicant has found no disclosure or teaching in Egan, Nonken, or Wypych, alone or in combination, of a composition as recited by claim 1, reconsideration of this rejection in light of these arguments is appreciated.

Claims 2-4, 10-12, and 15-17 depend from independent claim 1. Claims 13-14 have been cancelled with this communication, rendering their rejection moot. Consequently, claims 2-4, 10-12 and 15-17 are believed to be deemed allowable by depending from an allowable independent claim.

Similarly, because independent claim 18, upon which claims 25 and 26 depend, have been distinguished above regarding at least Egan and Nonken, it is believed that these claims are also deemed allowable by depending on an allowable independent claim.

8. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan (GB 2 110 693) in view of Nonken (US 3,812,314) and further in view of Wypych (Handbook of Fillers) and Betts (US 3,924,880).

The discussion with respect to Egan and Nonken in paragraph 7 above is incorporated here by reference.

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Egan fails to disclose the use of its acid-resistant composition in a countertop or a heat-activated catalyst.

Betts teaches that laboratory counter tops are made of highly acid-resistant materials such as epoxy resin (col. 1, lines 6-14). With respect to the heat-activated catalyst, it is considered that it would have been well within the capabilities of one of ordinary skill in the art to utilize heat and a heat-activated catalyst to prevent premature curing or to accelerate curing.

Given that acid-resistant compositions like those taught by Egan are used in laboratory countertops as taught by Betts, it would have been obvious to one of ordinary skill in the art to utilize Egan's composition in a countertop and thereby arrive at the presently cited claims.

Applicant respectfully traverses the rejection of claims 32 and 33. Egan, Nonken and Betts have been described above with reference to claims 34 and 35. Applicant contends that similarly, claim 32 is clearly patentable over the cited references, as none of the cited art suggests combining to form the Applicants instant invention. Additionally, none of the cited references, alone or in combination, recite all of the claim limitations of the resinous composition of claim 1, to which claim 34 refers.

Claim 33 depends from independent claim 32, which Applicant contends is patentable as originally submitted and as detailed above. Consequently, no amendment is made herein to claim 33 in response to this rejection. Reconsideration of these rejections in light of these arguments is appreciated.

9. Claims 5-9 and 27-31 are obvious over Egan (GB 2 110 693) in view of Nonken (US 3,812,314) and further in view of Wypych (Handbook of Fillers) and Hollstein et al (US 5,354,939).

The discussion with respect to Egan, Nonken, and Wypych in paragraph u above is incorporated herein by reference.

While the combined teachings of Egan and Nonken provide for an

acid anhydride such as hexahydrophthalic anhydride, it fails to teach other epoxy resin hardeners.

Hollstein et al discloses epoxy resin compositions

Given that Egan and Nonken teach acid anhydride epoxy hardeners and further given the teachings by Hollstein et al regarding known acid anhydride epoxy hardeners, it would have been obvious to one of ordinary skill in the art to utilize known acid anhydride epoxy hardeners as taught by Hollstein in the flooring composition taught by Egan and thereby arrive at the presently cited claims.

Applicant respectfully traverses this rejection. Egan, Nonken, Hollstein and Wypych have been described above. As detailed above, Applicant contends that none of these references, alone or in combination, disclose or teach all of the components of a curable resinous composition recited in claims 5-9 and 27-31.

First, the independent claims, upon which claims 5-9 and 28-31 depend, have been distinguished above regarding Egan, Nonken, Hollstein, and Wypych, and it is believed that these claims are deemed allowable by depending on allowable independent claims. Second, none of the cited references suggest the use of more than one carboxylic acid anhydride in combination with an epoxy resin. Egan makes no direct reference to the use of a carboxylic acid anhydride in its composition, while Nonken, in addition to being non-analogous art, indicates only that the commercial epoxy adhesive (Araldite®) offered by Egan can contain a single carboxylic acid anhydride. Nonken, however, is silent regarding if the acid anhydride is aromatic, alicyclic, or both. In Hollstein, epoxy resin compositions comprising an optional carboxylic acid anhydride are suggested, but again no mention or suggestion of using more than one carboxylic acid anhydride is made. Wypych is concerned only with the details of sand fillers. None of these references, alone or in combination, would teach the resinous composition

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of the present invention, comprising two or more carboxylic acid anhydrides, at least one of which is an aromatic anhydride and at least one of which is an alicyclic anhydride.

Furthermore, none of the cited references teach all of the claim limitations for pending claims 5-9 and 28-31, which are dependent upon independent claims 1 and 27, detailed previously. Accordingly, Applicant respectfully requests that the rejections of claims 5-9 and 27-31 under 35 U.S.C. § 103 be withdrawn.

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Conclusion

Of the 35 original pending claims in this application, claims 1, 4-8, 11, 18-19, 22-23, 25-27, 29 and 32-34 have been amended. Claims 13 and 14 have been cancelled. New claim 36 has been added. With this response, claims 1-12 and 15-36 are now pending in this application. Applicant respectfully submits that each claim is patentable, as detailed herein. A notice of allowance is respectfully requested.

Claims 11, 19, 23, 25-26 and 32-34 have been amended to correct typographical errors, errors in claim form and/or antecedent basis. Claims 1, 4-8, 18, 22, 27 and 29 have been amended not in response to the Examiner's rejections, but in order to more clearly point out Applicants instant invention. Support for the amendments to these claims can be found within the originally filed specification on page 4, line 27 to page 5, line 18. Claim 36 has been added in order to further characterize the heat activated catalysts which can be used in the hardening of the scratch-resistant countertops of the present invention. Support for this amendment can be found in the specification as originally filed on page 6, lines 23-25.

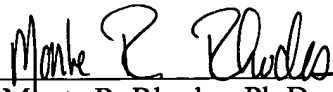
Applicant does not believe that any fees are due at this time. However, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason relating to this document, the Commissioner is hereby authorized to deduct the requisite fees necessary to make this and related papers timely and effective from Locke Liddell & Sapp LLP Deposit Account No. 12-1322, referencing matter number 019377-00100.

Applicant thanks the Examiner for his consideration and effort on this matter and submits that this application is now in condition for allowance. Applicant respectfully requests that a

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timely Notice of Allowance be issued in this case.

Respectfully submitted,

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